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preventing the semiconductor assembly from being lifted up or pushed down by the resin when the resin is injected into the cavity; and

pulling the support pin from the cavity into the mold before the resin is cured to release the semiconductor assembly from the pressure applied by the support pin.

12. (Twice Amended) A method of manufacturing a semiconductor device comprising the steps of:

supporting a heat radiator placed in a cavity of a mold with at least one support pin;

placing a die pad of a lead frame to which a semiconductor chip is secured on the heat radiator;

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closing the mold;

applying a pressure to the heat radiator by at least one support pin so as to cause a stress in the lead frame;

injecting a resin into the cavity from a resin injection port, the pressure applied by the at least one support pin preventing the heat radiator from being lifted up or pushed down by the resin when the resin is injected into the cavity; and

pulling the support pin from the cavity into the mold before the resin is cured to release the heat radiator from the pressure applied by the support pin.

15. (Twice Amended) A molding device for a semiconductor device comprising:
a mold which is capable of being opened or closed and is provided with a cavity for placing a semiconductor assembly which comprises a semiconductor chip secured to a die pad of a lead frame;

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a resin injection port provided to the mold for injecting a resin into the cavity;

at least one support pin provided in the cavity such that the support pin is able to enter into or be pulled out of the cavity to come in contact with the semiconductor assembly in the cavity; and

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an actuator which moves the support pin in a direction of the axis of the support pin such that during injecting the resin into the cavity the support pin applies a pressure to the semiconductor assembly so as to cause a stress in the lead frame, the pressure applied by the at least one support pin preventing the semiconductor assembly from being lifted up or pushed down by the resin when the resin is injected into the cavity, and such that the support pin releases the semiconductor assembly from the pressure applied by the support pin after the resin is injected before the resin is cured.

REMARKS

Claims 1-9, 11-18, 20-22, 24-27, 29 and 30 are pending. By this Amendment, claims 1, 12 and 15 are amended.

Applicant appreciates the courtesies extended to Applicant's representative by Examiner Smith during the September 10 interview.

The attached Appendix includes marked-up copies of each rewritten claim (37 C.F.R. §1.121(c)(1)(ii)).

Reconsideration based on the following remarks is respectfully requested.

I. The Claims Define Patentable Subject Matter

The March 13 Office Action rejects claims 1 and 3-10 under 35 U.S.C. §102(b) over JP08093594 (the 594 patent); claims 2, 11 and 15-30 under 35 U.S.C. §103(a) over the 594 patent in view of JP07241548 (the 548 patent); and claims 12-14 and 30 under 35 U.S.C. §103(a) over the 594 patent in view of JP04326933 (the 933 patent). These rejections are respectfully traversed.